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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/711,981	10/18/2004	Yen-Fu Chen	RSW920040131US1	5980	
1BM CORPORATION 3039 CORNWALLIS RD. DEPT. T81 / B503, PO BOX 12195 REASEARCH TRIANGLE PARK, NC 27709			EXAMINER		
			DUONG, OANH L		
			ART UNIT	PAPER NUMBER	
			2155		
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SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)	
	10/711,981	CHEN ET AL.	
Office Action Summary	Examiner	Art Unit	_
	Oanh Duong	2155	
The MAILING DATE of this communication app	ears on the cover sheet with the d	orrespondence address	
Period for Reply			
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tindicated apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. mely filed the mailing date of this communication. ED (35 U.S.C. § 133).	
Status			
1)⊠ Responsive to communication(s) filed on <u>18 De</u>	ecember 2006		
•	action is non-final.	•	
3) Since this application is in condition for allowar		osecution as to the merits is	
closed in accordance with the practice under E			
·	, , , , , , , , , , , , , , , , , , , ,		
Disposition of Claims			
4) Claim(s) 1-3 is/are pending in the application.			
4a) Of the above claim(s) is/are withdrav	vn from consideration.		
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>1-3</u> is/are rejected.		•	
7) Claim(s) is/are objected to.			
8) Claim(s) are subject to restriction and/or	election requirement.	•	
Application Papers	•		
9) The specification is objected to by the Examine	r.		
10) The drawing(s) filed on is/are: a) acce		Examiner.	
Applicant may not request that any objection to the			
Replacement drawing sheet(s) including the correcti	on is required if the drawing(s) is ob	jected to. See 37 CFR 1.121(d).	
11) The oath or declaration is objected to by the Ex	aminer. Note the attached Office	Action or form PTO-152.	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 119(a	)-(d) or (f).	
a) ☐ All b) ☐ Some * c) ☐ None of:			
1. Certified copies of the priority documents	s have been received.		
2. Certified copies of the priority documents		ion No	
3. Copies of the certified copies of the prior	ity documents have been receive	ed in this National Stage	
application from the International Bureau	(PCT Rule 17.2(a)).		
* See the attached detailed Office action for a list	of the certified copies not receive	∍d. ·	
	-		
•			
Attachment(s)		·	
1) Notice of References Cited (PTO-892)	4) Interview Summary	·	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)	Paper No(s)/Mail Date of Informal F		
Paper No(s)/Mail Date	6) Other:		

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#### **DETAILED ACTION**

1. Claims 1-3 are presented for examination.

#### Specification Objection

2. The disclosure is objected to because of the following informalities: the amended specification filed on 04/25/2006 is improper. Paragraph [0002] in page 11 must be paragraph [0006]; paragraph [0003] in page 12 must be paragraph [0008]; paragraph [0004] in page 13 must be paragraph [0009]; paragraph [005] in page 14 must be paragraph [0013]. Examiner respectfully request applicant to review applicant's specification originally filed on 10/18/2004 to amend or replace the specification in according to specification objection in Office Action dated 01/25/2006.

Appropriate correction is required.

# Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the

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time the application was filed, had possession of the claimed invention. The feature "a decision to re-allocate the resource from the standard customer to the premium customer is based on a plurality of customer information" found no support in applicant's specification. As defined in the applicant's specification in page 8 lines 17-18, the customer data/information include information regarding inventory, shipping, prices, and consumer records. Nowhere in applicant's specification defines that such information is used in decision of reallocating.

In telephone interview with Applicant's representative on 12/18/2006, applicant's representative indicated that the above feature is supported by paragraph 29 of the specification. Examiner asserts that the above feature is not supported by the paragraph 29 of applicant's specification.

## Claim Objections

4. Claims 1-3 are objected to because of the following informalities:

Regarding claim 1, the feature "the breach" in line 23 is not clear that the breach of the premium customer's service level agreement or that the breach of the standard customer's service level agreement; "a standard customer" in line 17 should be "the standard customer"; "a breach" in line 10 should be "the breach"

Regarding claim 2, the feature "the breach" in lines 21-22 is not clear that the breach of the premium customer's service level agreement or that the breach of the standard customer's service level agreement.

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Regarding claim 3, the feature "the breach" in line 17 is not clear that the breach of the premium customer's service level agreement or that the breach of the standard customer's service level agreement; "a standard customer" in lines 13-14 should be "the standard customer".

Appropriate correction is required.

# Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gandhi et al. (Gandhi), US 2005/0120102 A1, in view of Sankaranarayan et al. (Sankaranarayan), US 6,799,208 B1, and further in view of Rolia et al. (Rolia), US 2005/0240668 A1.

Regarding claim 1, Gandhi teaches process for allocating a resource (i.e., method for allocating network resource, page 2 paragraph [0019]), the process comprising: determining if the resource has been allocated to a customer that is not using the resource (i.e., determining if there are excess tokens, which represent unused network resource allocated to a customer, page 2 paragraph [0025]).

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Gandhi does not teach classifying a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a breach of the standard customer's service level agreement, and where the second compensation rate is less than the first compensation rate; responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer; responsive to determining that the resource has not been allocated to the any customer that is not using the resource, determining if the resource has been allocated to a standard customer; responsive to determining that the resource has been allocated to the standard customer, re-allocating the resource from the standard customer to premium customer; and determining the minimum total rebate payable by the service provider for the breach; and wherein the profiling tool collect a plurality of performance data by tracking and timing a plurality of transactions with the shared computing environment; and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer.

Sankaranarayan teaches resources management architecture implemented in computer system to manage resource wherein various policies

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are used to allocate resources (see abstract). Sankaranarayan teaches responsive to determining that the resource has not been allocated to any customer that is not using the resource, determining if the resource has been allocated to a standard customer (col. 15 lines 1-19); responsive to determining that the resource has been allocated to a standard customer, re-allocating the resource from the standard customer to the premium customer (col. 14 lines 1-41 and col. 15 lines 19-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Gandhi to reallocate the resource from standard/lower priority customer to premium/higher-priority customer as taught by Sankaranarayan. One would be motivated to do so to allow resources to dynamically/flexibly allocated based on which applications and/or customers have priority over others to use the resources (Sankaranarayan, col. 5 lines 11-13).

Rolia, in the same of endeavor, teaches classifying a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a breach of the standard customer's service level agreement, and where the second compensation rate is less than the first compensation rate (Fig. 1, page 2 paragraph [0025] and [0028], page 7 paragraph [0064], and page 10 paragraphs

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[0092]-[0094]); responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer (page 6 paragraph [0060], page 9 paragraph [0090]- page 10 paragraph [0094]); determining the minimum total rebate payable by the service provider for the breach (i.e., determine an arbitration result that minimizes fines to the computer operation facility or the service provider, page 5 paragraph [0050]), profiling tool collect a plurality of performance data by tracking and timing a plurality of transactions with the shared computing environment (i.e., monitoring component 334 creates an audit trail associated with requests, page 5 paragraph [0052]); and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data (i.e., the audit trail developed during the monitoring stages assists in understanding the allocation of resources, page 7 paragraph [0060]), a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer (i.e., rank/list applications/customers entitled to receive the limited resources according penalties., page 10 paragraphs [0093]-[0094]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of Gandhi to classify a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a

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breach of the standard customer's service level agreement, and where the second compensation rate is less than the first compensation rate; responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer; determining the minimum total rebate payable by the service provider for the breach, wherein the profiling tool collect a plurality of performance data by tracking and timing a plurality of transactions with the shared computing environment; and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer as taught by Rolia. One would be motivated to do so to reduce the likelihood of underestimating the costs and amount of resources needed by an application admitted and running within the system over a period of time (Rolia, page 2 paragraph [0024]).

Regarding claim 2, Gandhi teaches a data processing machine for allocating a resource to a customer in a shared computing environment (i.e., devices for allocating network resources, page 2 paragraph [0019]), the machine comprising:

a processor (processor 863, Fig. 8 paragraph [0076];

a memory (memory 865, Fig. 8 paragraph [0077];

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determining if the resource has been allocated to any customer that is not using the resource (i.e., determining if there are excess tokens, which represents unused network resources allocated to a customer, page 2 paragraph [0025]).

Gandhi does not explicitly teach a service level agreement stored in a memory, the service level agreement setting a threshold performance level for a resource and a penalty for failing to meet the threshold performance level; mean for causing a processor to measure the performance level of the resource; means for causing the processor to compare the performance level with the threshold performance level; and reallocating a resource from a standard customer to premium customer, determining the minimum total rebate payable by the service provider for the breach; and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer.

Sankaranarayan teaches resource management architecture implemented in computer systems to manage resources wherein various policies are used to allocate resources (see abstract). Sankaranarayan teaches allocating a resource to a premium customer in a shared computing environment (i.e., reassigning/reallocating resources from a low priority customer to higher priority customer, col. 5 line 14-17); means for causing a processor to measure the performance level of the resource (i.e., calculating the availability of given resources can be used, col. 8 lines 1-18); and means for causing the processor to compare

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the measured the performance level with the threshold (i.e., the provider compares the accumulator value to the total amount of resources it has, col. 15 line 64-col. 16 line 22); responsive to determining that the measured performance level does not meet the threshold performance level (i.e., the provider adds the amount of resources required for activity A2 and finds it exceeds the total amount of resources that it has. The resource provider returns a notice that it cannot satisfy the request given its current allocation, the resource manager then evaluates whether there is any lower priority activity that currently using the requested resources, col. 15 line 64-col. 16 line 22), determining if the resource has been allocating to a standard customer (i.e., the resource manager 102 checks all configurations 124 of all activities 122 with a lower priority than the one currently requesting resources to determine if any low priority activity is currently using resources, col. 15 lines 1-18 and col. 13 lines 47-67); and responsive to determining that the resource has been allocated to a standard customer, re-allocating the resource from the standard customer to the premium customer (i.e., the resource manager can reclaim resources from lower priority activities to satisfy the reservation request of a higher priority activity, col. 12 lines 22-45);

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Gandhi to measure the performance level of resources, to compare the measured performance level with the threshold performance level and to reallocate the resource from a standard/lower-priority customer to premium/higher priority customer as in Sankaranarayan. One would be motivated to do so to allow resources to be dynamically/flexibly allocated based on

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which applications and/or customers have priority over others to use the resources (Sankaranarayan, col. 5 lines 11-13).

Rolia, in the same field of endeavor, teaches a service level agreement stored in the memory (page 6 paragraph [0056]), the service level agreement setting a threshold performance level for the resource and a penalty for failing to meet the threshold performance level were the contract not to be fulfilled (page 6 paragraph [0060], page 8 paragraphs [0077]-[0081]); and determining the minimum total rebate payable by the service provider for the breach (i.e., determine an arbitration result that minimizes fines to the computer operation facility or the service provider, page 5 paragraph [0050]), and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data (i.e., the audit trail developed during the monitoring stages assists in understanding the allocation of resources, page 7 paragraph [0060]), a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer (i.e., rank/list applications/customers entitled to receive the limited resources according penalties., page 10 paragraphs [0093]-[0094]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the service level agreement setting a threshold performance level for the resource, a penalty for failing to meet the threshold performance level, determining the minimum total rebate payable by the service provider for the breach; and wherein a decision to re-allocate the

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resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer as taught by Rolia in the process of allocating resources in Gandhi. One would be motivated to do so to reduce the likelihood of underestimating the costs and amount of resources needed by an application admitted and running within the system over a period of time (Rolia, page 2 paragraph [0024]).

Regarding claim 3, this claim comprises a program, encoded in a computer-readable medium causing computer to execute the process claim 1, discussed above, same rationale of rejection is applicable.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being obvious over Gandhi et al. (Gandhi), US 2005/0120102 A1, in view of Sankaranarayan et al. (Sankaranarayan), US 6,799,208 B1, and further in view of Childress et al. (hereafter, Childress), US 2005/0256946 A2.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a

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706.02(I)(2).

showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal

disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be

overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as

prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and §

Regarding claims 1-3, Gandhi teaches process for allocating a resource (i.e., method for allocating network resource, page 2 paragraph [0019]), the process comprising: determining if the resource has been allocated to a customer that is not using the resource (i.e., determining if there are excess tokens, which represent unused network resource allocated to a customer, page 2 paragraph [0025]).

Gandhi does not teach classifying a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a breach of the standard

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customer's service level agreement, and where the second compensation rate is less than the first compensation rate; responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer; responsive to determining that the resource has not been allocated to the any customer that is not using the resource, determining if the resource has been allocated to a standard customer; responsive to determining that the resource has been allocated to the standard customer, re-allocating the resource from the standard customer to premium customer; and determining the minimum total rebate payable by the service provider for the breach; and wherein the profiling tool collect a plurality of performance data by tracking and timing a plurality of transactions with the shared computing environment; and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer.

Sankaranarayan teaches resources management architecture implemented in computer system to manage resource wherein various policies are used to allocate resources (see abstract). Sankaranarayan teaches responsive to determining that the resource has not been allocated to any customer that is not using the resource, determining if the resource has been allocated to a standard customer (col. 15 lines 1-19); responsive to determining that the resource has been allocated to a standard customer, re-allocating the

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resource from the standard customer to the premium customer (col. 14 lines 1-41 and col. 15 lines 19-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Gandhi to reallocate the resource from standard/lower priority customer to premium/higher-priority customer as taught by Sankaranarayan. One would be motivated to do so to allow resources to dynamically/flexibly allocated based on which applications and/or customers have priority over others to use the resources (Sankaranarayan, col. 5 lines 11-13).

Childress, in the same of endeavor, teaches classifying a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a breach of the standard customer's service level agreement, and where the second compensation rate is less than the first compensation rate (Fig. 6, page 7 paragraphs [0068]-[0070]); responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer (page 4 paragraph [0047]); determining the minimum total rebate payable by the service provider for the breach (identifying the lowest penalty associated with currently active SLAs, page 6 paragraph [0065]); wherein profiling tool collect a plurality of performance

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data by tracking and timing a plurality of transactions with the shared computing environment (page 4 paragraph [0047]); and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium customer (page 5 paragraphs [0052]-[0053]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of Gandhi to classify a plurality of customers into a plurality of premium customers and a plurality of standard customers where a premium customer is entitled to a first compensation rate when there is a breach of a premium customer's service level agreement, where a standard customer is entitled to a second compensation rate when there is a breach of the standard customer's service level agreement, and where the second compensation rate is less than the first compensation rate; responsive to a profiling tool indicating that the premium customer's available resource cannot provide an agreed service level resulting in a breach of the premium customer; determining the minimum total rebate payable by the service provider for the breach, wherein the profiling tool collect a plurality of performance data by tracking and timing a plurality of transactions with the shared computing environment; and wherein a decision to re-allocate the resource from the standard customer to the premium customer is based on the plurality of performance data, a plurality of customer information, a target list of standard customers, the status of the standard customer and the status of the premium

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customer as taught by Childress. One would be motivated to do so to minimize the amount of loss due to breaching of SLAs because of limited available resources (Childress, page 2 paragraph [0017]).

## Response to Arguments

8. Applicant's arguments filed 12/18/2006 have been fully considered but they are not persuasive.

In the remarks, applicant argued in substances that

(A) Rolia does not disclose determining the minimum total rebate payable by the service provider for the breach.

As to point (A), Rolia does teach determining the minimum total rebate payable by the service provider for the breach (i.e., determine an arbitration result that minimizes fines to the computer operation facility or the service provider, page 5 paragraph [0050]).

(B) Rolia does not disclose the use of a target list of standard customer, nor does Rolia disclose that decision to shift resource would based upon all of the following data: performance data, the target list and the status of the customers.

As to point (B), Rolia does teach the use of a target list of standard customers (i.e., ranking applications/customers according to penalties. Based on this ranking, the present invention would select one or more applications to not receive the resource(s), page 10 paragraphs [0093]-[0094]), and that decision to shift resource would based upon performance data (page 6 paragraph 61: audit trail developed during the monitoring stages assists in understanding the

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allocation of resources), the target list and the status of the customers (Rolia discloses comparing the class of service associated with one or more applications/customers and the associated penalties (i.e., status of customers) specified in the application/customer's corresponding contract or SLA, and then select application/customer to not receive resource in order to minimize the penalty to facility/provider, page 10 paragraphs [0093]-[0094]).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 9:30PM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O.D

January 7, 2007